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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,737	12/16/2003	Koji Mine	246639US0	3647

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EXAMINER	
SOLOLA, TAOFIQ A	

ART UNIT	PAPER NUMBER
1626	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/735,737	MINE ET AL.	
	Examiner	Art Unit	
	Taofiq A. Solola	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *06 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) *6 and 7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 1-7 are pending in this application.

Claims 6-7 are drawn to non-elected subject matter.

Restriction Requirement

The election of group I, claims 1-5, with traverse in the Paper filed 6/6/05 is hereby acknowledged. The traversal is on the basis that the Examiner fails to provide evidence that the groups are different and therefore the restriction is improper. This is not persuasive because the Examiner in fact set forth reasons for the restriction in the last Office action,

The restriction is still deemed proper and therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phraseology "an aldehyde represented by formula (2) . . . or less per mol of the aldehyde", claim 1, lines 5-15, is confusing and therefore claims 1-5 are indefinite.

Claim 5 is not clear and therefore indefinite. It is not clear which amount of the catalyst applicant is claiming: the amount in claim 1 or the amount sufficient to neutralize or alkaline the aqueous layer. Appropriate correction is required. In patent examination, it is essential for claims to be precise, clear, correct, and unambiguous. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al, GB 2 146 995 A.

Applicant claims a process of making 2-(1-hyroxyalkyl) cycloalkanone and/or 2-(1-hyroxyaryl) cycloalkanone of formula 3, comprising aldol condensation of a cycloalkanone with an aldehyde of formula 2 in the presence of a basic catalyst and water. The molar concentration of the basic catalyst is not less than that of the carboxylic acid of formula 1 present in the reaction mixture. This implies, the molar amount of the catalyst must be greater or equal to that of the carboxylic acid, optimally the difference is 0.06 mole or less of the aldehyde. Applicant also recycle the waste in claims 3 and 4.

Determination of the scope and content of the prior art (MPEP ∋2141.01)

Tamura et al., teach a process of making 2-(1-hyroxyalkyl) cycloalkanone of formula 3, comprising aldol condensation of a cycloalkanone with an aldehyde of formula 2 in the presence of a basic catalyst and water.

Ascertainment of the difference between the prior art and the claims (MPEP ∋2141.02)

The difference between the instant invention and that of Tamura et al., is that applicant claims molar amount of the catalyst must be greater or equal to that of the acid, optimally the difference is 0.06 mole or less of the aldehyde. Also, Tamura et al., do not make 2-(1-hyroxyaryl) cycloalkanone.

Finding of prima facie obviousness---rational and motivation (MPEP ∋2142.2413)

However, it is well known in the art that aldehyde is easily oxidized to carboxylic acid. For example, see the specification at page 1, 3rd paragraph, lines 1-2. Therefore, the reaction mixture of Tamura et al., inherently comprises carboxylic acid, and there is no evidence the molar amount of the catalyst is not greater or equal to that of the acid. Consequently, the Examiner assumes the molar amount of the catalyst is greater or equal to that of the acid in the reaction mixture of Tamura et al., absent a showing to the contrary. Even then, making the molar amount of the catalyst greater or equal to that of the acid is merely an optimization of a variable, is not patentably significant absent unexpected result which is different in kind and not merely in degree from that of the prior art. *In re Aller,* 22 F.2d 454,105 USPG 233 (CCPA, 1955). The process of making 2-(1-hyroxyaryl) cycloalkanone would have involved using an aryl aldehyde instead of an alkyl aldehyde as a starting reagent. The aryl aldehyde and alkyl aldehyde are deemed analogous starting material because the aldehyde functional group, not alkyl or aryl, is involved in the reaction process. However, the use of analogous starting material in a well-known process is prima facie obvious. *In re Durden,* 226 USPQ 359 (1985). Also, recycling the waste material is an obvious modification available to the special preference of an artisan. Therefore, the instant invention is prima facie obvious from the teaching of Tamura et al. One of ordinary skill in the art would have known how to optimize a variable in the process of Tamura et al., and/or use an analogous starting material at the time this invention was made. The motivation is to optimize the yield of the product, and from knowing that analogous starting materials are interchangeable in a known process.

Foreign Priority

Applicant's claim of foreign priority is not granted because a certified English translation of the priority document is not yet filed.

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taofiq A. Solola, PhD, J.D. whose telephone number is (571) 272-0709.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Joseph McKane, can be reached on (571) 272-0699. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

TAOFIQ SOLOLA
PRIMARY EXAMINER
Group 1626

June 24, 2005